

**Tribhuvan University  
Institute of Science and Technology  
2072**

Bachelor Level/ Fourth Year/ Seventh Semester/ Science  
**Computer Science and Information Technology (CSc-406)**  
(Database Administration)

**Full Marks: 60 | Pass Marks: 24 | Time: 3 hours.**

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

**Section A**

**Attempt any Two questions. (2x10=20)**

1. Explain any detail about the DBMS architecture.
2. What do you mean by database performance Tuning? Explain the role of ADDM and SQL Access Advisors in performance testing of oracle database.
3. As a DBA explain how you can manage user privileges, roles and profiles? Consider you got a call from your backup DBA while you are on leave. He has corrupted all of the data files while playing with the ALTER DATABASE CONTROLFILE command. What do you do? Explain.

**Section B**

**Attempt any Eight questions. (8x5=40)**

4. Differentiate between logical and physical data independence.
5. What are the authentication method for DBA? Explain.
6. What is redo log buffer and how do you monitor a waiting session in the redo log buffer?
7. Differentiate between hot and cold backup. What is involved with executing a hot backup?
8. Consider a situation that an alteration is made to the sp file which results in the instance being unable to start. As DBA how can you fix this problem?
9. What do you mean by a view? Explain its importance.
10. What do you mean by parallel instance recovery?
11. What is oracle virtual private database? Explain the benefit associated with it.
12. Write the DBA queries for the following actions:
  - a. To display the size of your database
  - b. Lock or unlock a user
  - c. Show all connected users with their status
  - d. Show the current SQLs
  - e. Show what roles are granted to a user.